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ECONOMIC TRENDS

RESULTS FROM THE 1991 CENSUS OF AGRICULTURE

1. Introduction

The Census of Agriculture was conducted June 1991, at the time of the Census of Population. Results released recently by Statistics Canada demonstrate a continuation in the trend to fewer farms on Prince Edward Island, as well as to a trend to larger farms. The Census recorded 2,361 farms on the Island out of the 280,043 counted in Canada. The total number of farms in Canada in 1991 was 4.5 per cent below the level of 1986 and 23.5 per cent below the level identified 20 years before in 1971. For Prince Edward Island the declines were 16.7 per cent below the level of 1986 and 48.0 per cent below that of 1971. The amount of the total land area of Prince Edward Island that was recorded as farmland in 1991 was 46 per cent, compared to 48 per cent in 1986.

The 1991 definition of a Census farm was an operation that produced at least one of the following products for sale in 1990; crops, livestock, poultry, animal products, greenhouse or nursery products, mushrooms, sod, honey or maple syrup. In earlier Censuses a minimal value of products was included in the definition ($250 in 1981 and 1986, $50 prior to 1976), but this restriction was dropped in 1991.

The purpose of this issue of Economic Trends is to provide a general summary of the Census results as they pertain to Prince Edward Island.

2. Area in Farming

The 1931 Census of Agriculture classified 85 per cent of the province's land mass as farmland. In that year there were 12,865 farms occupying 1,191,000 acres (of a total land area of 1,398,000 acres). By contrast the 1991 Census recorded only 2,361 farms on Prince Edward Island, occupying 640,000 acres. The average farm size in 1931 was 93 acres, compared to 271 acres in 1991. It might be noted that a large part of the farm acreage reported in earlier Censuses included sizable acreages of woodland and other unimproved lands.

Table 1 identifies basic statistics for Prince Edward Island from the 1931, 1951, 1971 and 1991 Censuses of Agriculture.

Table 1
Basic Census Statistics
Prince Edward Island

	1931	1951	1971	1991
Land Area of P.E.I. '000 Acres	1,400	1,400	1,400	1,400
Area in Farms '000 Acres	1,191	1,095	775	640
Number of Farms	12,865	10,137	4,543	2,361
Percentage of Land in Farms	85.2%	78.3%	55.4%	45.7%
Average Farm Size, Acres	93	108	171	271
Population on Farms	55,478	46,855	21,338	8,560*
As Per cent of Total Population	63.0%	47.6%	19.1%	6.6%

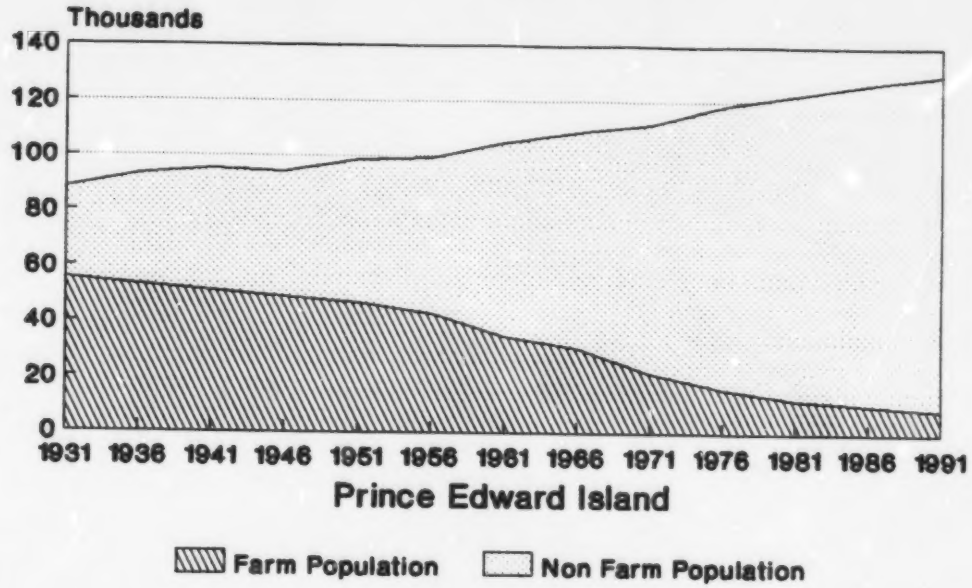
*Estimated

The trend to less farms on the Island has prevailed throughout the twentieth century. Consequently there are few Islanders today who actually live on farms. While the 1991 official estimate of the population on farms is not yet available we are able to estimate its size. In 1986 the percentage of the Island's population living on farms was 8.1 per cent and in 1991 it is estimated to approximate 7 per cent. This is in striking contrast to the situation of 1931 when the percentage was 63 per cent.

Diagram 1 displays the size of the Island's population, from 1931 to 1991, separating the farm population from the non-farm population. We should note that the farm population is the household associated with the operator of the farm. Families of farm workers or owners of partners living off the farm are not included in these numbers. From Diagram 1 one can see that the decline in the population living on farms was most severe between 1956 and 1976 when it fell by 27,300. During the last twenty year period, 1971 to 1991, it fell by 12,800 and today there are less than 9,000 persons living on farms. One can also see from this diagram that the dominance of the non farm community has increased, forming 121,200 of the 129,800 persons living on the Island in 1991.

Diagram 1

Farm Population in Relation to Total Population



A discussion of the results of the 1991 Census of Population was provided in the Economic Trends publication No. 46, July 1992. That discussion noted that the principal growth of Prince Edward Island took place on the outskirts of Charlottetown and that most rural areas experienced little population change if not declines in some areas. Clearly, the continued shrinkage in the population associated with farming is a factor impacting on the lack of growth of rural Prince Edward Island.

3. Land Use

The 1991 classification of the utilization of farmland was slightly different from previous Censuses in that the categories "unidentified improved land", "woodlands" and "other unimproved lands" were not provided. These numbers are in the "other" category in Table 2.

Table 2
Land Use Statistics
'000 Acres

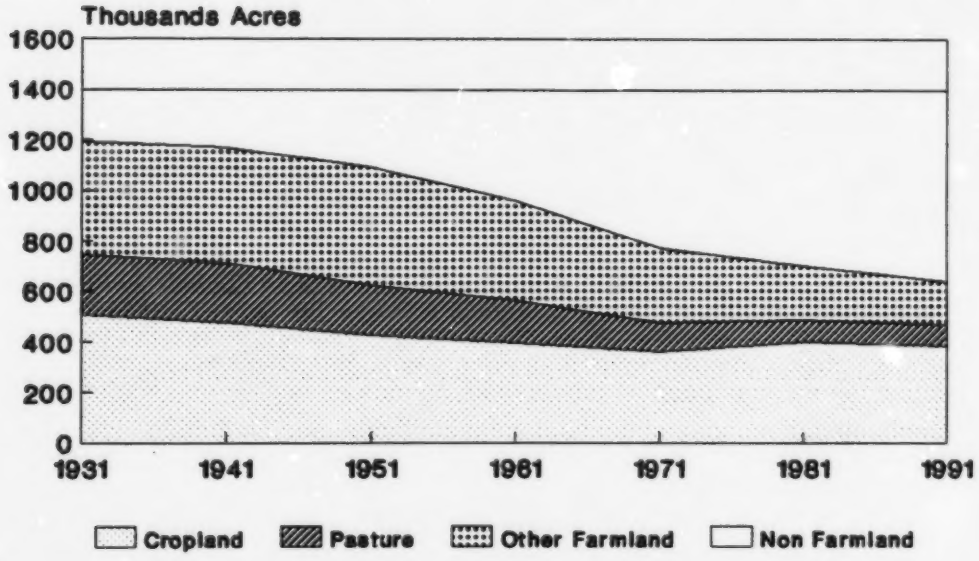
	1931	1941	1951	1961	1971	1981	1991
Total Farm Land	1,191	1,169	1,095	960	775	699	640
Under Crops	497	470	426	391	351	391	381
Pasture	242	237	198	168	114	90	48
Summerfallow	9	4	2	3	9	7	2
Other	443	458	469	398	301	211	209

The "Other" category, in 1986 identified 151,000 acres of woodlots owned by farmers, 62,000 acres of other unimproved lands of farmers and 11,000 acres of unidentified improved land.

The information in Table 2 indicates that the land area of Prince Edward Island devoted to crops has been relatively constant since 1961 at between 350,000 and 390,000 acres although in earlier years it was considerably higher. There has been a continuing decline in pastureland with only 47,636 acres identified as "improved land for pasture or grazing" in 1991. However there were an additional 39,207 acres identified in 1991 in a new category called "unimproved land for pasture, grazing or hay" which may account for part of the apparent decline since 1981.

Diagram 2

Land Use
Prince Edward Island



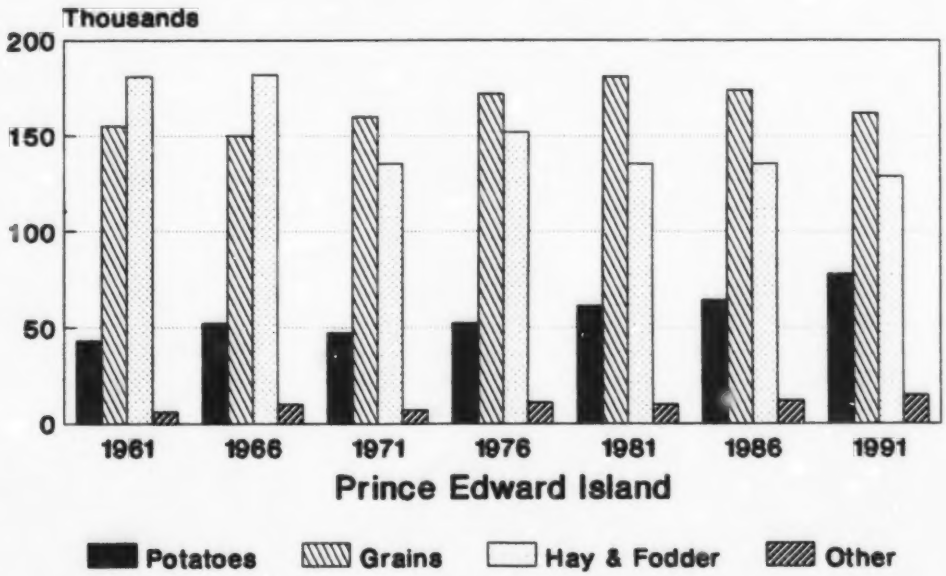
The general pattern of change in land use since 1931 is displayed in Diagram 2. It is apparent that farmers are no longer holding non farmed lands to the degree they used to. This could be because in the process of farm consolidation operating farms are acquiring the usable lands of retiring farmers who are retaining ownership of the unimproved acreages (largely woodlots).

4. Lands in Crops

The largest use of the Island's farm land is for the production of grains, with 158,000 acres being put to that purpose in 1991. The acreage in grains has swung between 150,000 acres and 181,000 acres in the last seven Censuses. This can be seen in Diagram 3. In 1991 the largest seeded grain acreage was in barley at 84,200 acres, followed by mixed grains at 40,700 acres. The sale of grains outside of the farming sector is very limited on Prince Edward Island and in 1991 only $3.8 million of the $239 million farm cash receipts came from grains. This is because grains are principally being grown for livestock feed on the Island.

Diagram 3

Land Under Crops
Acreage by Type



The acreage devoted to hay and fodder was 129,000 acres in 1991, which was somewhat below the 133,000 acres recorded in 1986. Adding this acreage to the grain acreage indicates that some 287,000 acres of the total 381,000 acres of croplands was essentially being used for animal feed in 1991. Part of the cropland in grains and hay is also potato acreage which is in a three year rotation.

The acreage in potatoes was 77,800 acres in 1991, the largest seeded acreage ever recorded in potatoes. Potatoes are the largest cash crop on the Island, with sales valuing $96.8 million that year. The growth of the acreage in potatoes is in contrast to the general shrinkage in farmlands devoted to other principal farm products.

Other crops being cultivated on Prince Edward Island include soybeans (5,900 acres), tobacco (1,900 acres), peas (500 acres), beans (1,700 acres), berries (2,000 acres), tree fruits (100 acres), miscellaneous vegetables (3,100 acres) and greenhouse products.

A complete listing of the products being farmed, by their acreages in 1991 is shown in Table 3.

Table 3
Detailed Account of Farm Acreages in Crops, 1991

	Acres		
Wheat	11,321		
Oats	17,540		
Barley	84,183		
Mixed Grain	40,742		
Corn (Grain)	465		
Buckwheat	66		
Rye	3,682		
Total Grain		157,999	
Corn (Silage)	2,888		
Alfalfa	19,160		
Tame Hay	105,301		
Other Fodder	1,503		
Total Hay & Fodder		128,852	
Soybeans	5,877		
Potatoes	77,809		
Dry Field Peas	498		
Dry Field Beans	1,705		
Tobacco	1,879		
Tree Fruits	102		
Berries	1,982		
Vegetables	3,059		
Other	1,034		
Total Miscellaneous		93,945	
Total Land in Crops			380,796

Land in Vegetables, Acres

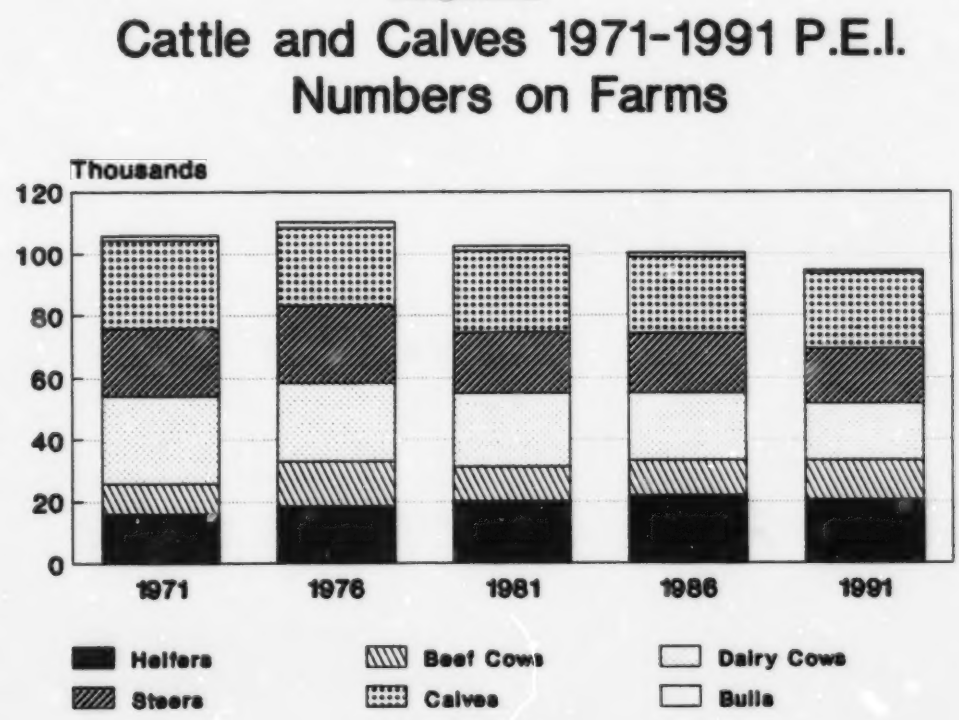
Sweet Corn	114	Radishes	4
Tomatoes	5	Onions	18
Cucumbers	15	Lettuce	66
Green Peas	1,702	Spinach	6
Green, Wax Beans	17	Peppers	2
Cabbage	118	Squash	29
Chinese Cabbage	1	Rhubarb	2
Cauliflower	25	Other Vegetables	46
Broccoli	26	Nursery Products	32
Brussel Sprouts	74	Sod	23
Carrots	450		
Turnips	331	Greenhouses No.	29
Beets	10	Mushroom Houses No.	1

5. Livestock

Whereas Prince Edward Island is principally known for its potato production, it could be seen from the previous section that by far the largest part of the Island's farm land in any year is utilized for livestock production. Adding together the land in grain production, in hay and fodder production and the improved and unimproved pasture land, the acreage for livestock sums to 374,000 acres of the total utilized farmland of 470,000 acres. (As noted previously some of this acreage is used for potatoes in a three year rotation).

In 1991, 1,610 Island farmers reported cattle and calves numbering 94,573. There were 649 farms with 18,318 dairy cows in 1991 and that number has been declining since 1971 when 2,789 farms had 28,174 cows. Farmers reported 12,977 beef cows, 20,328 heifers, 1,205 bulls, 17,779 steers and 23,966 calves in 1991. With the exception of beef cows and heifers, all categories show a slow decline in numbers over the Census years and Diagram 4 displays the trends that have been apparent since 1971 for the Island's cattle herds. One can see that the total number of cattle peaked in 1976 at 110,400 after which it has declined to present levels.

Diagram 4



The number of farms reporting pigs has been declining, from 2,046 in 1971 to 460 in 1991, though the total pig population increased from 100,936 to 106,728. However there has been a declining trend in numbers of pigs since 1981 when there were 116,843 on farms. The number of sheep and lambs on the Island has fallen significantly over the Census years, from 8,484 on 241 farms in 1971, to 3,394 on only 79 farms in 1991. The number of horses and ponies has also declined, from 2,941 on 1,532 farms in 1971, to 1,891 on 432 farms in 1991.

The general pattern that can be discerned for the number of livestock on farms is one of a progressive decline in totals and large declines in the number of farms with livestock. Consequently the number of animals per farm has been rising. The number of pigs per farm has risen from 49 in 1971 to 232 in 1991. The number of cattle and calves per farm has risen from 29 in 1971 to 59 in 1991.

6. Size of Farms

The average farm size has been increasing throughout the century, rising from 93 acres in 1931 to 271 acres in 1991. But given the wide variation in farms of different sizes, it is misleading to believe that the average farm on Prince Edward Island today is about 271 acres in size. The statistics displayed in Table 4 show the number of farms, by size, from 1961 to 1991.

Table 4
Farms Classified by Size
Prince Edward Island, 1961-1991

	1961	1971	1981	1986	1991
Total Farms	7,335	4,543	3,154	2,833	2,361
By Acreage					
Under 3	51	33	77	100	56
3-9	91	58	72	80	66
10-69	1,414	660	423	380	328
70-129	2,845	1,447	735	558	393
130-179	1,398	835	457	383	305
180-239	863	653	414	381	283
240-399	558	611	577	512	461
400-559	86	145	217	231	239
560-759	17	62	87	101	110
760-1,119	9	19	57	67	61
1,120-1,599	2	12	24	20	34
1,600 & Over	1	8	14	20	25

One can see that the bulk of Island farmers in 1961 had farms of between 10 and 399 acres with a concentration in the 70-129 acre category. Throughout the last 30 years there has been a continuous reduction in the number of farms that fall into these acreages. Between 1961 and 1991 there was a loss of 5,308 farms of that size, out of the 7,078 farms that were in these acreages in 1961. By contrast, the number of farms of 400 acres and over has increased throughout the Census years, from a mere 115 farms in 1961, to 469 in 1991. Nevertheless, the predominant farm size in 1991 remained at less than 400 acres, at between 240 and 399 acres.

Diagram 5

Number of Farms by Size
Prince Edward Island

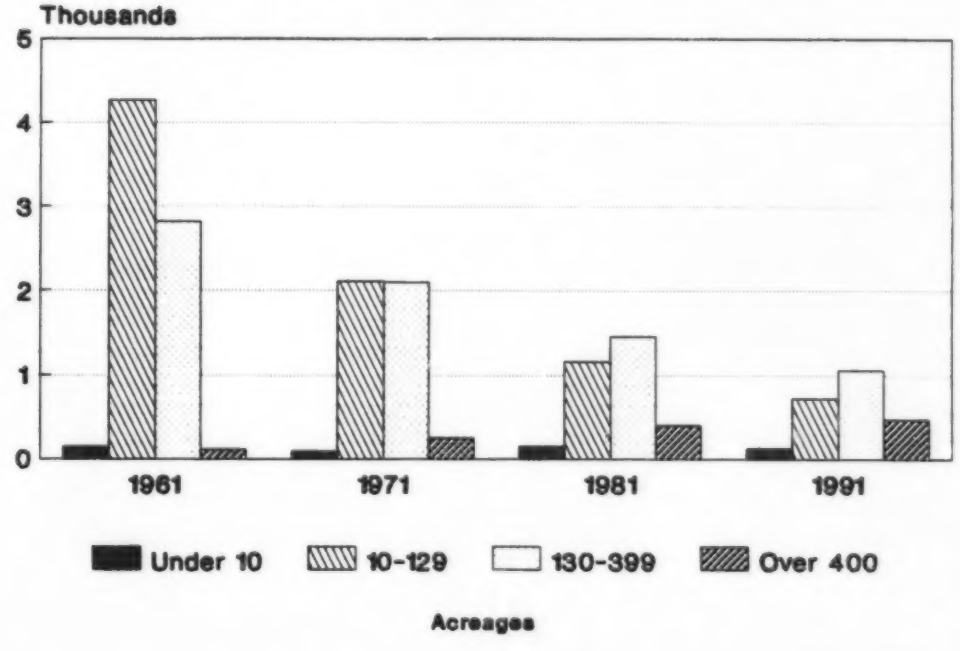


Diagram 5 displays a summary of the numbers of farms by size in the 1961, 1971, 1981, and 1991 Censuses. One might note that the very small farms have numbered between 100 and 180 throughout, with no discernible trends. The Diagram demonstrates the extraordinary decline in numbers of 10-129 acre farms that has occurred on Prince Edward Island since 1961.

In Diagram 6 a more detailed perspective of the change in farm size is provided, from 1981 to 1991.

Diagram 6

Farm Size Prince Edward Island 1981-1991

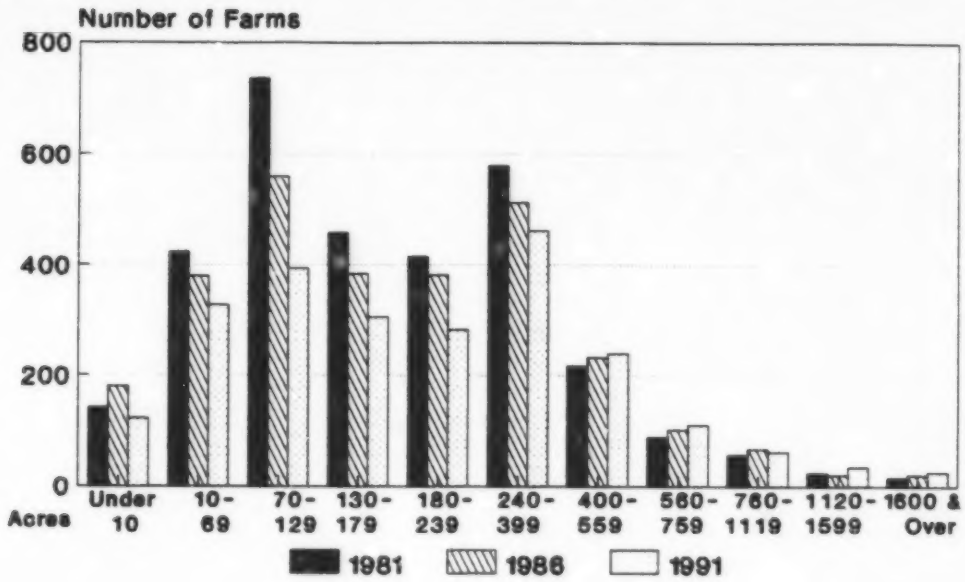


Table 5
Census Farms by Value of Gross Sales, 1990 Constant $

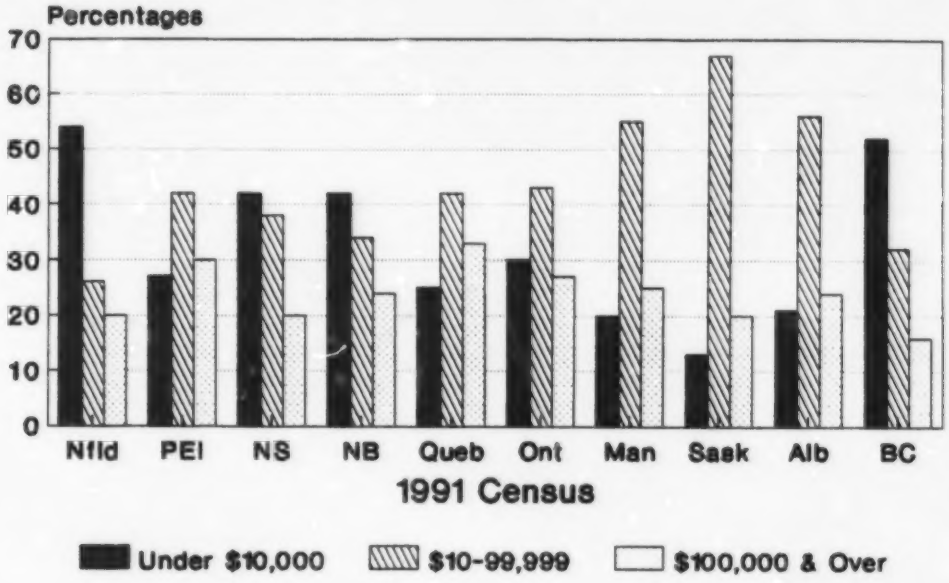
	1971	1981	1986	1991
Under $2,500	805	541	364	217
$2,500-4,999	433	295	248	184
$5,000-9,999	654	359	284	244
$10,000-24,999	1,211	531	452	383
$25,000-49,999	740	381	368	261
$50,000-99,999	404	437	429	355
$100,000-249,999	240	445	444	434
$250,000-499,999	46	113	169	180
$500,000 and Over	10	52	75	103
Total Number of Farms	4,543	3,154	2,833	2,361

The general decline in numbers of farms is closely associated with the movement to intensive use of machinery and equipment and the consequent need to have significant cash sales of farm products. We can see in Table 5 that the decline in numbers of farms

between Censuses has been concentrated in farms with less than $100,000 in sales, although on a constant dollar basis even the number of farms with sales of $100,000-249,999 has been in a small decline since 1981, when they went from 445 farms down to 434 farms. These data suggest that annual farm sales of at least $100,000 are now needed for sustained agriculture.

Diagram 7

Farms By Gross Receipts Canadian Provinces



In Diagram 7 we identify how, by the yardstick of gross sales, the Island's farmers compare with those of other Provinces. We can see that in 1991 Quebec and Prince Edward Island had the highest proportion of farms in the over $100,000 category, at 33 per cent and 30 per cent respectively. Manitoba, Saskatchewan and Alberta's farms were dominated by sales of $10-99,999, whereas British Columbia and Newfoundland farms were predominately in the under $10,000 category. Nova Scotia, New Brunswick and Ontario all have a larger proportion of their farms in the under $10,000 category than does Prince Edward Island. These data suggest that Prince Edward Island has moved to a more commercial basis for its agriculture than many other provinces. But the numbers also reflect the major decline in the number of smaller farms that has occurred here.

It might be noted that the proportion of Island farms with sales of over $250,000 was 12.0 per cent in 1991 and this was the highest proportion of any province. Only 3 per cent of Saskatchewan farms fell into that category in 1991. Also, with the exception of British Columbia, the trend towards increasing numbers of farms with sales over $100,000 and declining numbers of farms with sales less than $100,000, was apparent in all provinces between 1971 and 1991.

Table 6
Farms with Sales of $2,500 or More, by Major Product Type, 1971-1991, Prince Edward Island

	1971	1981	1986	1991
Total	2,783	2,585	2,458	2,144
Dairy	629	768	584	498
Cattle	373	547	652	488
Hogs	259	255	221	203
Poultry	21	26	28	27
Wheat	-	5	4	3
Small Grains	11	85	90	60
Other Field Crops	616	462	474	530
Fruits & Vegetables	25	50	60	80
Specialties	19	88	149	144
Livestock Combination	746	204	127	83
Other Combinations	84	95	69	28

Table 6 identifies the number of farms on Prince Edward Island with sales of $2,500 or more, by the predominant commodity produced by each farm. By predominant we mean at least 50 per cent.

The largest group identified is for "Other Field Crops" and there were 530 of them in 1991. This includes the production of potatoes, tobacco, and dry field peas. Given the strength of expansion of acreage in potatoes it is not surprising that there has been growth of the number of farms in this category. Large downward movements in the number of farms can be seen in Dairy, Cattle, Livestock Combination, and to a lesser degree Hogs. As noted earlier the downward movement in farming acreages on Prince Edward Island appears noticeably in livestock operations.

7. Use of Machinery and Equipment

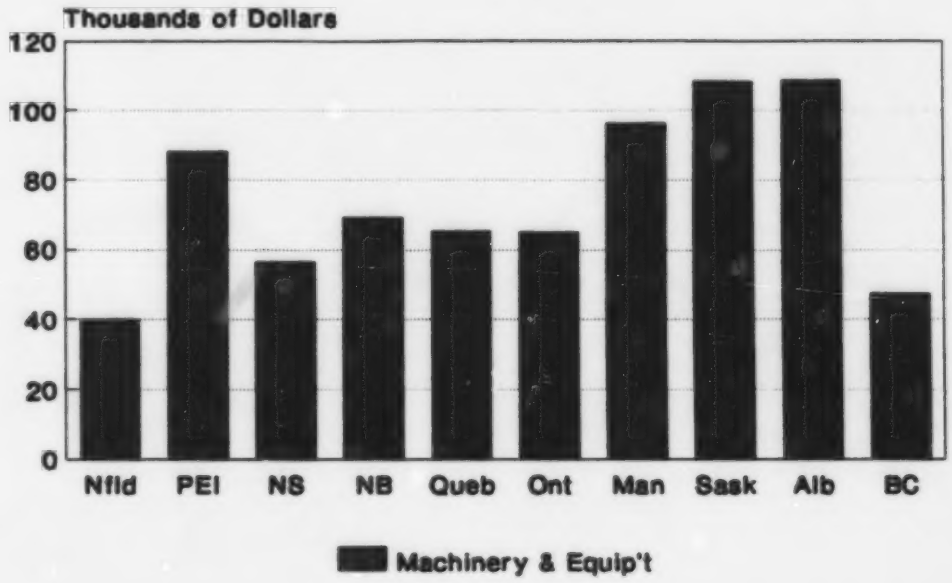
The data in the 1991 Census shows that Island farmers are among the more highly mechanized in Canada. Diagram 8 permits comparison of the average value of machinery and equipment per farm by province.

As one might expect, the Prairie provinces are in a somewhat different category than other provinces in light of their concentration on large scale grain production. But one can see that Prince Edward Island has a far higher value of machinery and equipment per farm than other provinces outside the Prairies. The average value per farm was

$87,908 on Prince Edward Island in 1991. By comparison it was $56,418 in Nova Scotia. The difference shows up in the fact that 93 per cent of Island farms indicated they had tractors, compared to only 87 per cent in Nova Scotia; 40 per cent of Island farms had grain combines, compared to only 9 per cent in Nova Scotia; 1,414 Island farmers utilized $15.6 million of cultivation, tillage and seeding equipment, compared to the $12.3 million worth of such equipment used by 1,850 Nova Scotia farmers.

Diagram 8

Value of Machinery & Equipment Per Farm 1991 Census



8. Operating Arrangements

The 1991 Census provides information on the type of ownership of farming operations. This has become fairly complicated and consequently the 1991 Census has more details on this than earlier Censuses.

Table 7
1981 and 1991 Census
Farms by Ownership Arrangements

	1981	1991
Total Number of Farms	3,154	2,361
Individual, or Family Farms,	2,639	2,305
Reporting two or more Operating Arrangements	n/a	685
One Arrangement	n/a	1,620
Corporations, One Arrangement		
Family	119	19
Non family	6	8
Partnerships, One Arrangement		
With Written Agreement	168	12
Without Written Agreement	211	3
Other Farms	11	8
Other Combinations, non family	n/a	6

Note: 1981 Classification not fully comparable with 1991.

In Table 7 we can see that the 1991 Census identified 2,305 farms as individually or family owned and operated of which 685 farms were operated in combination with either partnerships or corporate arrangements for various aspects of the farm operation, and 1,620 farms were run as a single individual or family run arrangement.

The 1991 data indicate that there were 15 farms run in a straight partnership arrangement and 27 incorporated farms run as such. Of the 685 farms with at least two operating arrangements, 511 had partnership arrangements for some aspect of their operation, and 174 individual family farms had corporate arrangements for part of their operation.

9. Summary and Conclusions

The underlying movement to fewer farms and larger farm operations is clearly continuing apace and the population associated directly with farming is becoming smaller, despite the low level that was identified in 1986. Thus only 7 per cent of Islanders today live on farms. Though not discussed in this Trends publication, the economic dependence of farm families themselves on farming has become quite limited, because a large part of

farm family incomes is now derived from off farm sources of employment (see Economic Trends No. 22 for a discussion of this).

In terms of trends, the Island's land area in farms is falling, though the acreage in active production is fairly stable. This suggests that farm consolidation leaves non productive land outside the farm domain. Some 80 per cent of utilized farmland is annually in grain production, hay and fodder production and pasture.

The livestock population on Prince Edward Island is shrinking slowly, particularly in the case of the dairy herd. Thus there has been a slow shrinkage in farmlands devoted to livestock production.

The major expansion in farm output and land use has been for potato production and the 1991 Census recorded some 78,000 acres of land in potatoes, and this is the highest ever recorded. Present information for 1992 indicates that this number has been raised again this year.

The main farm products are potatoes, milk, hogs and beef, but Island farmers produce a wide variety of other farm products and acreages devoted to these products, while modest, have remained fairly stable. The exception is the tobacco acreage which has been in decline.

Farms of at least 400 acres are increasing in number while smaller operations are in decline. Gross cash receipts of more than $100,000 appear necessary to sustain farm operations. This development is the result of the highly mechanized nature of modern farms and the 1991 Census shows that Prince Edward Island farms are more highly mechanized than farms in other provinces, with the exception of the Prairies.

Given the importance of farming to the Prince Edward Island economy the results of the 1991 Census are of particular interest to this Province. This Trends publication is hopefully useful to those wishing to understand developments in this important sector of the Island economy.